



Boosting Laboratory Specimen Management with Barcoding

Helps Reduce Identification and Tracking Errors and Safeguard Patient Health

Specimen identification errors can have detrimental impacts on patient health because they can delay, impede or misdirect treatment options¹—60% to 70% of which are determined by lab results.² Other negative consequences include increased costs for the healthcare facility, longer patient stays and damage to the facility's reputation.

To process patient specimens promptly, yet prevent misidentification, many labs have implemented a process that identifies and tracks specimens with barcodes. Barcode technology has proven to boost specimen identification efficiency by automating data entry.³ More importantly, it has proven to reduce specimen identification error rates. A retrospective study revealed that barcode scanning and one-on-one specimen collection education resulted in a 90% reduction in specimen identification errors.⁴

Implementing a barcode specimen identification process can help reduce errors, as much as **90%**.⁴

¹ deRin, G. (2010). Pre-analytical workstations as a tool for reducing laboratory errors. *Journal of Medical Biochemistry*, 29(4), 315-324. doi:10.2478/v10011-010-0031

² Green, S. F. (2013). The cost of poor blood specimen quality and errors in preanalytical processes. *Chemical Biochemistry*, 46, 1175-1179.

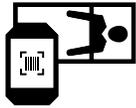
³ Barcode Labeling in the Lab—Closing the Loop of Patient Safety, white paper, Zebra Technologies, 2016

⁴ Specimen labeling errors: A retrospective study, *Online Journal of Nursing Informatics (OJNI)*, 19 (2), June 2015. <http://www.himss.org/ojni>



Raising Lab Performance with Accurate Specimen Identification and Tracking

For many patients, time is of the essence and an accurate, rapid diagnosis can mean the difference between a positive and negative health outcome. Barcode technology, including scanners, label printers, handheld mobile computers and software, helps labs serve a critical diagnostic role in several ways.



Capturing Specimen Data Efficiently and Accurately

Scanning of a specimen barcode label ensures quick, reliable data capture that can aid diagnosis accuracy while maintaining the chain of custody that began at the patient bedside. This practice also documents specimen receipt, initiation of testing and the technician who is handling the specimen—all of which are potentially valuable data in case questions about specimen processing arise.



Enhancing Patient Safety

By eliminating the need for multiple data entries, barcode label printing and scanning reduce specimen misidentification errors. Also, these processes document the steps taken in specimen handling at any given time, so lab technicians can track specimens down when necessary and ensure that they are analyzed in a timely manner. Better specimen data-capture accuracy and tracking ability help lab technicians ultimately enhance patient safety.



Maximizing Workflow Efficiency, Minimizing Costs

Operational efficiency is a critical aspect of overall lab performance. Delayed identification of a single specimen can slow down the entire operation, causing multiple diagnosis delays. Barcode printing and scanning solutions designed for lab environments help prevent bottlenecks and maintain workflow efficiency by minimizing manual data entry.



Zebra® Has Your Laboratory Specimen Management Solutions

Poor specimen management in the lab can lead to misdiagnoses and preventable adverse patient outcomes. Also, it can create the need for unnecessary tests and treatments and specimen redraws and re-analysis, driving up operating costs and often causing patients discomfort. Barcode labeling and scanning store and capture data that enable labs to capture specimen data and create a reliable tracking chain of custody and enable analysis that's essential to correct diagnoses. Zebra® desktop and industrial printers, barcode scanners—including those built into ruggedized mobile computers—and specimen labels comprise the technology labs need to help make correct diagnoses and treatment efficacy possible.

Solutions for Lab Test Processing Accuracy and Efficiency



Barcode Scanners

Lab personnel need to capture specimen barcode data from any medium, in any condition, the first time. Engineered for reliability in clinical environments, Zebra® healthcare scanners offer accurate specimen data collection.



Handheld Mobile Computers

In the hectic lab environment, a mobile device that dependably scans specimen barcode data and enables multi-platform communication keeps the identification process flowing seamlessly. Zebra® healthcare mobile computers have integrated, advanced scanning technology that rapidly captures 1D and 2D barcodes; a durable design with drop ratings suited to cement hospital floors; disinfectant-ready plastic; and long-lasting batteries constructed to last an entire shift.



Desktop and Industrial Printers

Lab technicians need worry-free printing to accurately identify specimens and keep testing processes moving. Zebra® desktop and industrial printers for healthcare utilize thermal technology that leaves out additional personal health information that would require secure disposal. They feature disinfectant-ready plastic and a healthcare-compliant power supply to suit the lab environment.



Software, Supplies and Services

DataCapture DNA Software

Hospitals can deploy and maintain devices for maximum operating performance throughout the enterprise with DataCapture DNA, a portfolio of scanner productivity, visibility, management and application development tools. DataCapture DNA enables greater worker efficiency through seamless application integration and maximum device performance.



Link-OS Intelligent Printer Operating System

Link-OS is Zebra's one-of-a-kind enterprise printer operating system. Enabling advanced connectivity capabilities, extensive device management and advanced privacy controls, no other printer OS delivers this level of intelligence and innovation.



Print DNA Software

Print DNA is a suite of powerful productivity, management, development and visibility tools for Link-OS printers. These tools offer a common, customizable printer user experience that enables fast, accurate printing; remote enterprise-level printer management tools; and easy printer integration into existing infrastructures.



Zebra® OneCare Visibility Services

OneCare ensures that Zebra® devices achieve maximum uptime and peak performance. Multiple service levels are available to meet each hospital's unique requirements and protect operational investments.



Specimen Labels

Zebra® Certified Supplies use materials and adhesives that enable them to label all shapes and sizes of specimen containers and accommodate testing and storage requirements. Also available: durable thermal transfer blood bag labels, including ISEGA- and ISO 3826-compliant 8000T Primary Blood Bags for direct labeling and 8000T Secondary Blood Bags that maintain traceability in primary label overlay applications. Additionally, 8000T Lab Resist labels feature extreme low temperature adhesion while maintaining high print quality, image durability, and smear and scratch resistance in cryogenic applications.



To learn more about Zebra's laboratory management solutions,
visit www.zebra.com/healthcare



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